Our Last Frontier— The Canadian North

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Fort Smith, on the Slave River just north of the Alberta-Northwest Territories boundary, is the administration headquarters for the Mackenzie District of the Northwest Territories. Its facilities include a hospital, schools, missions, Government radio and meteorological stations and a landing field.

Our Last Frontier— The Canadian North

O the early explorers who first penetrated the northern latitudes, the cruel harshness of nature and the apparent barrenness of the scene that spread itself before them on all sides were the chief impressions left on their minds. According to the literature they left behind them, they were much dismayed by what they saw there. For instance, in 1587, John Davis wrote, "no viewe of wood, grasse or earthe to be seene, and the shore two leagues into the sea full of yee. The . . . irksome noyse of the yee was such as to breed strange conceits amoung us".

But in spite of the monotonous distances and the severe climate of that formidable land, which at first glance must have seemed like a bone picked clean, the white men persevered. Economically speaking, they were drawn on by the hope of finding a northwest passage to the riches of the Indies, by the wealth to be won from whaling in Arctic waters, and by the fabulous profits to be made by draping the furs of the north country over the fairest shoulders of Europe. They were unaware of the wealth in minerals that lay beneath the snows—the mineral wealth that to-day provides the impetus for the continuing development of the North.

There was, of course, more to it than this purely economic concept. At that time, when the European nations were spreading culture over the unknown parts of the world, the spirit of adventure in man seems to have run higher than ever before or since. Men adventured and died purely for the sake of knowing what lay beyond the next hill. Sir John Franklin, for instance, could not rest until the straight dotted line on the British Admiralty chart of the Arctic Coast of North America was replaced by a heavy black line showing every bleak inlet, bay and headland.

Since those days when every trip into the North held the promise of hardship and death, science has modified the white man's attitude towards that land. The aeroplane has reduced the element of hardship in travel, and the radio has lessened the feeling of isolation from the outside world. In the larger centres, modern homes have replaced rough log cabins and the amenities of central heating, electricity, and running water are commonplace. In many places the earth is cultivated through the long days of the Arctic summer and it would be difficult to find a permanent home that did not have its own garden patch. In Yukon, particularly, the home garden has made the people almost self-sustaining horticulturally, a fact that the early explorers would have had difficulty in believing.

In spite of these modifications of thought, the North is still a frontier—the last in North America and one of the last in the world. But the term "frontier", as applied to the Canadian North, should be qualified. The usual connotations of "frontier" are backwardness, isolation, and lack of the benefits of civilization. In these senses, the Canadian North is unlike any of the

frontiers that came before it chronologically, because the whole weight of the technical knowledge of the twentieth century has been brought to bear on its development. It is the aeroplane and not the covered wagon that is pushing forward the boundaries of civilization in the Canadian North.

Thus, the picture of the North to-day is a composite one, and in some ways a contradictory one. In small patches where the mineral wealth is most readily available the process of civilization is virtually complete, and yet over the greater part of the vast stretches of barren land it is as if man had never existed.

Physical Characteristics

In physical terms, Yukon and the Northwest Territories stretch more than 2,500 miles from Davis Strait on the east to Alaska on the west. They are bounded on the south by the sixtieth parallel of latitude and on the north by the Arctic Ocean, and include the islands in the Canadian sector of the Arctic Ocean reaching to the North Pole. They comprise approximately 1,500,000 square miles, more than one-third of the whole area of Canada, and have a population of approximately 12,000 Indians and Eskimos and as many white persons. The population density—or rather sparsity—is thus about one person to every 60 square miles.

The Canadian North can be divided from east to west into three main sections. The Precambrian Shield portion of the Northwest Territories extends for about 1,000 miles from Hudson Bay on the east to the Mackenzie River Valley on the west. It consists largely of hummocky ground, with the ridges and hills separated by depressions occupied by lakes or muskegs. The countless lakes are of all sizes and shapes, with irregular shorelines and many small islands. From the air, much of the terrain resembles a flat field dotted with puddles after an exceptionally heavy rain. The Mackenzie lowland is a northward extension of the Interior Plains of central Canada and consists of the Mackenzie River Valley and a low-lying depression extending from Great Slave Lake north to Great Bear Lake. This area is relatively fertile and is well wooded with poplar, spruce and jack pine. Yukon Highlands, which properly include the Mackenzie Mountains in the Northwest Territories, is an extension of the great Cordilleran Region of Western Canada. It is a region of hills and mountains separated by a network of large valleys. The central feature is a great basin-like area called the Yukon Plateau which is drained by the Yukon River and walled in on the north, east and southwest by mountains.

From north to south the country can be divided into the barren and treeless Arctic Islands, or Arctic Archipelago, the so-called "barren-lands" or treeless portion of the mainland of the Northwest Territories, and the more southerly timbered portion of those Territories. Although the actual line of demarcation between the wooded and treeless areas is very irregular and broken, it runs roughly from the mouth of the Churchill River at Hudson Bay, northwest to the Mackenzie Delta.

The Arctic is often referred to as Eastern and Western, the former being that part most easy of access by boat from the east and the latter the part that is usually entered via Western Canada and the Mackenzie River system.

The main inroads of civilization into the North have been made for the most part along the Yukon River and the Alaska Highway in Yukon and in

the Mackenzie River Valley and around Great Slave Lake in the Northwest Territories. Here are the largest centres, Whitehorse in Yukon and Yellowknife in the Northwest Territories, both with populations in the neighbourhood of 4,000. Throughout the Eastern Arctic and on the Arctic Islands are scattered Missions of various religious orders, Royal Canadian Mounted Police posts, government weather and scientific stations, and the fur-trading posts of the historic Hudson's Bay Company.

The climate ranges from extremely cold to reasonably moderate. A temperature of 81 degrees below zero has been recorded at Snag in Yukon, and yet, except on the Arctic coast and islands, the summer days are long and warm. Snowfall in the north is not heavy, in spite of the popular notion of incessant storms raging across the barren lands. Because of the cold weather, however, the snow that does fall remains on the ground for a long time. In general, it might be said that the climate makes it difficult, but not impossible, to live there.

Resources

Mining.—In assessing the wealth of a region and the possibilities of its economic development, the most relevant factors are its physical resources, its accessibility and its people. For the North, there is no doubt that the resources on which its future depends are its minerals. At the present time, however, the factor of accessibility plays a determining role. For instance, in the well known Yellowknife mining district, it is not profitable at present to mine ore that averages less than 0.45 ounce of gold per ton. If this same ore occurred in the mining districts of northern Ontario it would be fabulously rich, because there it is profitable to mine ore that contains as little as 0.15 ounce of gold per ton. Thus, locked in the northern reaches of the Precambrian Shield are tremendous reserves of ore that will be developed when the problem of transportation is solved. In the meantime, however, development goes forward steadily in the richer and more accessible areas.

The history of mining development in the North is a short one. The great Klondike strike in Yukon in 1896 was the beginning. In the rush that followed, the population of Dawson city boomed to 25,000 and in the short space of seven years more than \$100,000,000 worth of gold was taken out by placer mining. As the easily worked deposits dwindled, prospectors searched the Mayo area and, in the 1920's, \$28,000,000 in silver-lead ore was taken out; in the same period oil in commercial quantities was discovered at the site now known as Norman Wells. The first well was drilled there in 1920. In 1929 and 1930, radium- and silver-bearing ores were discovered on the east shore of Great Bear Lake, only a short distance south of the Arctic Circle. There is no doubt that these now-established radium and uranium deposits alone will make Canada one of the important countries in the new atomic age.

In 1933 and 1934 new gold finds were made in the Yellowknife River area in the Northwest Territories, and by 1935 a major gold rush had developed. The lead-silver deposits of the Mayo area in Yukon became important in 1945 because of world demand and high prices, and production increased greatly. In 1946, for similar reasons, interest revived in the previously known lead-zinc deposits at Pine Point on the south shore of Great Slave Lake.

Mining Developments in the Northwest Territories.—The most recent reports on developments in the mining districts of the Northwest Territories indicate that there is general optimism as a result of recent work, both in the immediate vicinity of Yellowknife and in the outlying districts. Giant Yellowknife Gold Mine, the leading producer in the Territories, now employs 350 men and has constructed some of the finest mining buildings in Canada. The policy of providing the best in living quarters and recreational facilities for employees has reduced the labour turnover markedly, and is eliminating the air of impermanence, characteristic of new mining developments.

Other important producing mines in the Northwest Territories are Negus, Con Rycon, and Discovery, the latter the most recent to come into production. Value of mineral production in 1949 was \$6,801,729, of which \$6,389,748 was in gold. The total value of minerals produced in the Northwest Territories to the end of 1949 was \$31,721,499.

As the above figures indicate, gold is economically the most important mineral in the Northwest Territories. In addition, commercial quantities are produced of radium and uranium (information concerning which is confidential), silver, and petroleum products. There are also known occurrences of nickel, copper, tungsten, tantalum, beryllium, lithium and coal.

The area in which the most intensive exploratory work has been undertaken in recent years is Pine Point on the south shore of Great Slave Lake. The rich lead-zinc deposits there were first discovered in 1898 by Klondike gold miners, but at that time it was not economic to develop them. Serious work was begun in 1929, and \$300,000 was spent on geological work, diamond drilling and test pitting. Approximately 500,000 tons of ore had been blocked out when the work was brought to a halt by the depression in 1929. The advance in base-metal prices brought renewed interest to the area in 1946. Since then, more than 48,000 feet of diamond drilling has been done and more than 100 miles of road and two airstrips have been built.

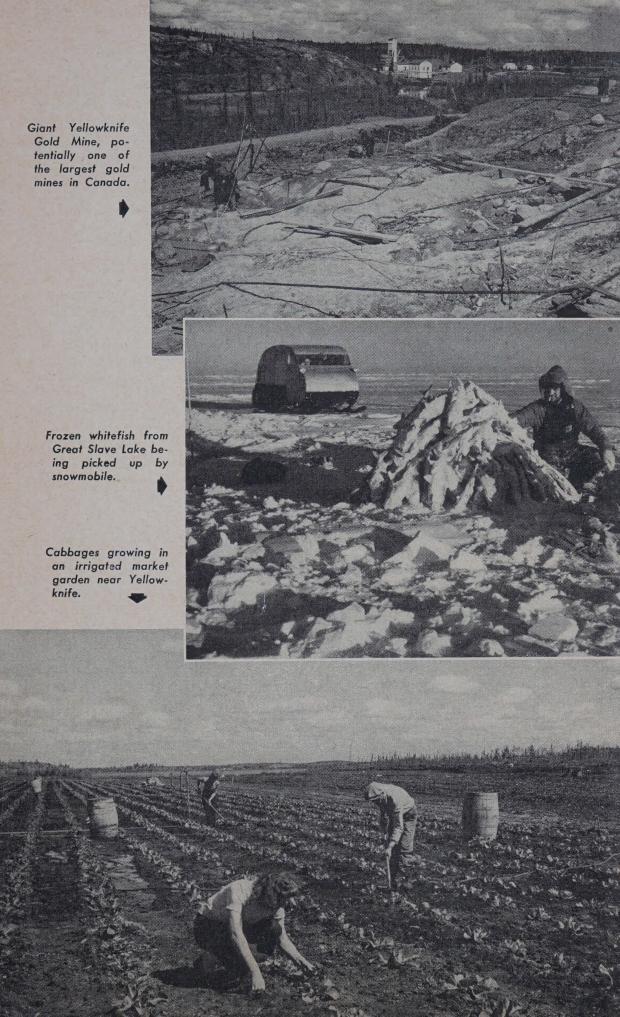
Petroleum production at the present time is confined to the Norman Wells area and these reserves alone would make the Northwest Territories self-sufficient in oil in the foreseeable future. But now the search for oil in Alberta has reached the northern boundaries of that Province and is extending into the Territories. Permits have been issued for exploratory work in the vicinity of Fort Providence. The permits cover an area of more than 2,000,000 acres and at least \$100,000 will be spent by the investigating parties during the latter half of 1950 and in 1951.

Mining Developments in Yukon.—The value of mineral production in Yukon in 1949 was \$5,099,176, of which \$2,950,920 was for gold. The value of gold production increased by \$829,430 over the previous year.

The three mining districts are Dawson, Mayo and Whitehorse. Virtually all of the gold produced in Yukon is from placer operations, mainly in Dawson District. The rich deposits of galena and sphalerite on Galena Hill in the Mayo District account for the silver, lead and zinc production. Some placer and coal mining is done in the Whitehorse District.

For some time now, mineral production in Yukon has been relatively stable. However, much of the country has not been thoroughly prospected even though the geology of these areas is favourable for the occurrence of minerals. Recently, prospecting activity has increased, particularly in the

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Whitehorse and Mayo Mining Districts, as there are known occurrences of lead, zinc, copper, lode gold, silver, antimony, manganese, placer gold, molybdenite, coal, tungsten and tin. Helicopters are being used to increase the range of prospecting and the chief activity has taken place around Whitehorse and in the Kluane Lake and Carmacks areas. Also it is felt that the systematic use of magnetometer and electrical resistivity surveys, which have proved useful under similar conditions in other parts of Canada, may locate new commercial ore bodies in Yukon.

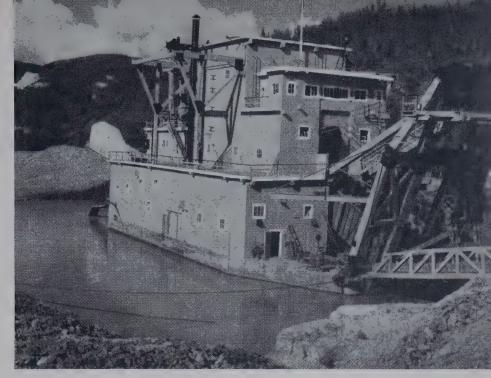
Furs.—For a century and a half, the fur trade was the entire basis of the northern economy. Although its value has now declined relative to mining, its absolute value has remained constant. It still sustains almost the whole native population and probably will continue to do so far into the future. The chief types of pelt taken are white fox, muskrat, beaver, red fox, mink and marten. The number of pelts taken and consequently the value of the industry fluctuates with the cycles of abundance of wildlife. Over the years, however, the annual value of production of furs in the North has averaged close to \$2,500,000. In recent years the Federal Government has followed a policy of regulating trapping to protect the welfare of the native population and to ensure the economical harvesting of the fur crop on a sustained-yield basis. Among the measures that have been instituted are restrictions on the number of white trappers, the setting aside of preserves on which only natives are allowed to trap, open and close seasons for the trapping of most animals, the fixing of a maximum bag for certain fur-bearers, and the creating of preserves and sanctuaries on which no one is permitted to hunt or trap. This policy is based on information obtained from sources such as the Royal Canadian Mounted Police, the fur traders, and the trappers themselves; it is, in effect, recognition of the continuing importance of the fur trade to the economy of the North.

Other Natural Resources that will Provide the Bases for Potential Industries.—It is a common conception that the future of the North can be defined in terms of minerals and furs. While this, of course, is true, it gives rise to the question of whether there are other potential industries that would contribute to a more balanced economy. Is it feasible to develop the fisheries resources on a commercial scale? Is there timber for construction purposes? Is there sufficient water power to turn the wheels of industry? Can enough food be grown to support a substantial population? The present development and potentiality of industries, subsidiary to mining and furs, is outlined in the following paragraphs.

Fisheries.—Great Slave Lake in the Northwest Territories, the fifth largest lake on the continent and only 340 miles south of the Arctic Circle, has, in the past five years, become the centre of a million-dollar commercial-fishing business. Pushing out in their boats in the misty dawns of the summer and fishing through the ice in the winter, the fishermen, including natives, caught approximately 8,000,000 lb. of trout, whitefish and inconnu in 1949. Here again in this industry the modern touch is evident. To expedite the operations of the 1,000 persons employed, use is made of aircraft, snowmobile and tractor.

Reindeer Herding.—An industry sponsored by the Federal Government and introduced to make capital of the conditions peculiar to the North is reindeer herding. This industry was established in an attempt to provide

One of the giant dredges used for placer-mining operations in the Klondike Valley. It is capable of dredging soil 63 ft. below the surface of the water.



the Eskimos with a livelihood which would augment and conserve the game resources on which they depended. The first herd of approximately 2,400 reindeer was delivered overland from Alaska in 1935 to a previously prepared station near the mouth of the Mackenzie River. White men and native Laplanders formed the nucleus of the herding staff and an important aspect of their job was to train young Eskimos in the technique of herding so that they would be able to manage reindeer herds on their own account and thus lay the foundations of a stable means of livelihood. In 1948 a native-managed herd was formed and a second was established in 1950.

The 1950 annual roundups of the main Government herd and the two native-managed herds showed a total of 7,500 reindeer, of which about two-thirds were in the main herd.

Timber.—The timber resources of the Canadian North are inadequate to meet the increasing local needs, particularly of the mining industry, and it can be expected that importations from the provinces will increase. In the Northwest Territories the limited commercial stands of timber in the Mackenzie District are being utilized to provide building materials and mining and fuel-wood requirements. A number of small mills are operated on the Slave and Mackenzie Rivers cutting white spruce almost exclusively. Poplar and jack pine are used chiefly for fuel.

In Yukon, because of the generally higher altitude, timber is more scarce and is found in commercial size only in the major valleys and depressions. In the years following the gold rush of 1898, the entire city of Dawson was built of lumber that grew in the vicinity, and by 1930 the supply close to the Yukon River was exhausted. Since then, timber requirements for the Dawson and Whitehorse areas have been imported from British Columbia although two mills are still operated at Mayo and a small one at Dawson. There are important stands in the districts situated south of the sixty-first parallel and east of the Lewes and Yukon Rivers as far north as the sixty-fifth

parallel where it is possible that the rate of growth can satisfy local needs and even provide an exportable surplus to less-favoured areas. White spruce is the most common species and makes up the bulk of all important stands.

Agriculture,—Although the percentage of arable land in the North is low, surprisingly good results have been obtained with various crops, both at experimental and practical levels. In the Northwest Territories, such development has been confined to the valleys of the Mackenzie River system, where small-scale farming operations and gardening have been carried on since the early days of settlement. Soil and horticultural surveys were made in the Mackenzie District by the Government in 1944 and 1945, and an experimental substation was established at Fort Simpson. Nowadays many of the homes have their garden patches and the officer in charge of the Fort Simpson Substation visits the various settlements from Norman Wells south to advise and assist home gardeners and the few who depend upon agriculture for a livelihood. The largest commercial undertaking in the Northwest Territories is carried on at Trout River, a few miles south of Fort Simpson on the Mackenzie River. This farm supplies much of the produce required at Norman Wells and other Mackenzie River points. Yellowknife has a number of market gardens (the largest being 10 acres in extent) which supply a portion of the requirements of the settlement during the summer season. The chief vegetables grown in the Mackenzie District are potatoes, carrots and cabbages.

In Yukon, farming activity has decreased considerably since the first years of this century, when thousands of acres were under cultivation to supply the influx of population brought about by the Klondike gold strike. At the present time farm income is derived largely from the local sale of butter, milk, beef, pork and vegetables. As in the Northwest Territories, almost every home in Yukon has its garden patch. In 1943, a broad soil reconnaissance survey was made of lands adjoining the Alaska Highway and in the Yukon River basin. In 1944, an experimental substation was established at Pine Creek, 106 miles west of Whitehorse and adjacent to the Alaska Highway. The substation staff conducts off-station co-operative field experiments at sites in the interior so that complete coverage of the territory will be secured. Experiments with poultry, cattle, hogs and spring grain have been very successful. Investigations indicate that about 160,000 acres in Yukon could be put under cultivation, 100,000 acres located in the Takhini-Dezadeash Valley traversed by the Alaska Highway, and 60,000 acres along the Yukon River flats.

The future of agriculture in Yukon is, of course, closely linked with the development of other resources, particularly minerals. The converse of this statement is also true—that the further development of mineral resources will be substantially aided by a versatile agricultural industry.

Water Power.—Another resource that is extremely important to the future mineral development of the Canadian North is that of water power. The lack of coal or oil (except at Norman Wells) in sufficient quantities and of easy access makes the development of large blocks of power exclusively dependent on water power. However, the water-power resources of the North are small in comparison with the southern part of Canada and, generally

speaking, the topographical conditions favourable to power development obtain only in limited areas. Further, the rate of precipitation is only about 12 inches per year, surface run-off ceases during the long winter and, except where natural or artificial lake storage is available, river flows fall to meagre amounts by late spring. Nevertheless, the power resources of the North are estimated at approximately 1,000,000 h.p. at ordinary six-month flow, and this will be sufficient to handle industrial expansion for the foreseeable future.

Present power developments in the North consist of a plant on the Klondike River about 26 miles above Dawson in Yukon, which supplies 15,000 h.p. for placer-mining operations and for the requirements of Dawson; the Bluefish Lake development in the Northwest Territories, which supplies 4,700 h.p. to mines in the area; and the recently completed Snare River development, which supplies 8,350 h.p. to the Giant Yellowknife gold mine and the townsite of Yellowknife. The first two power projects were built by mining companies and the latter by the Federal Government. Work is proceeding on a new plant at Mayo designed to facilitate the production of silver-lead ores in the Mayo and Keno areas. Ultimate cost of the project will be about \$3,000,000 and between 6,000 and 8,000 h.p. will become available when the plant attains maximum capacity.

Transportation

The problem of transportation—of overcoming the obstacles of distance and climate—has always been one of the most stubborn blocks to opening up the North and probably will continue so for a long time to come. To the ordinary difficulties involved in setting up a system of transportation are

The settlement at Arctic Bay, N.W.T., with King George V Mountain in the background.



added specifically northern obstacles such as perma-frost—that is, permanently frozen sub-soil that requires special techniques in road-building.

In the North there are three main modes of transportation—water, highway and air. Much of the heavy freight is still transported by water, increasing amounts of freight are being carried by truck over the roads, and passenger traffic is largely handled by aircraft.

The two great inland waterways of the Canadian Northwest are the Mackenzie and the Yukon, both of which rank among the ten greatest river systems in the world. The series of rivers and lakes of the Mackenzie system have a total length of 2,635 miles from the headwaters of the Finlay River in the Rocky Mountains to the Mackenzie Delta on the Arctic Coast and the area drained is approximately 700,000 square miles or about one-quarter of the mainland area of Canada. Freight on the Mackenzie waterway is carried by large barges pushed by small propeller-driven, diesel-engined vessels.

The Yukon River is 1,979 miles from the headwaters of the Nisutlin River in the Mackenzie Mountains. Of this length, 714 miles is in Canada and the rest in Alaska. It drains an area of 320,000 square miles, of which 127,000 are in Canada. There is steamer service on the Yukon River system; a coastal steamship service from Vancouver, B.C., to Skagway; and a supplementary railroad service on to Whitehorse.

The great drawback to the water-highway systems of the Canadian Northwest is that they are open to navigation only four to five months of the year. It is not yet clear how they will be affected by increasing year-round competition from aircraft and trucks. However, it is so economical to transport bulk freight by water that the role of the rivers in the transportation system of the North will likely continue to be one of importance.

It is only in recent years that roads have begun to probe into what has often been accurately described as the "trackless wilderness". The Alaska Highway, built as a war measure, traverses the southern part of Yukon. There are numerous access roads leading to airports along the Northwest Staging Route, secondary roads radiate from Whitehorse, Dawson and Mayo to the adjacent mining districts, and an all-weather gravelled highway connects Whitehorse and Mayo. In the Northwest Territories, the recently completed Mackenzie Highway links the railhead at Grimshaw, Alberta, to Hay River settlement on Great Slave Lake. This 385-mile all-weather highway facilitates the movement of freight to the Yellowknife mining district and to other settlements in the Mackenzie Valley.

It is obvious that these older forms of transport—road and water—will always be of prime importance to the North. In fact, the importance of the road system will doubtless increase as it expands in keeping with the needs of the country. Nevertheless, it is the swift wings of the aeroplane that have in recent years enabled so much to be achieved in so brief a space of time. So significant is the air age to the North that it has been stated that the whole history of the Canadian North can be divided into two periods—before and after the coming of the aeroplane.

The aeroplane, with its speed and range, has brought the outermost parts of the North to within a few hours of effortless flying time. Scheduled airlines operate from Edmonton and Vancouver into Yukon and beyond; to Yellowknife in the Northwest Territories; and to settlements in the Mackenzie



The wood-burning, paddle-driven steamer "Whitehorse" makes the round trip between Whitehorse, Yukon, and Fairbanks, Alaska, in nine days.

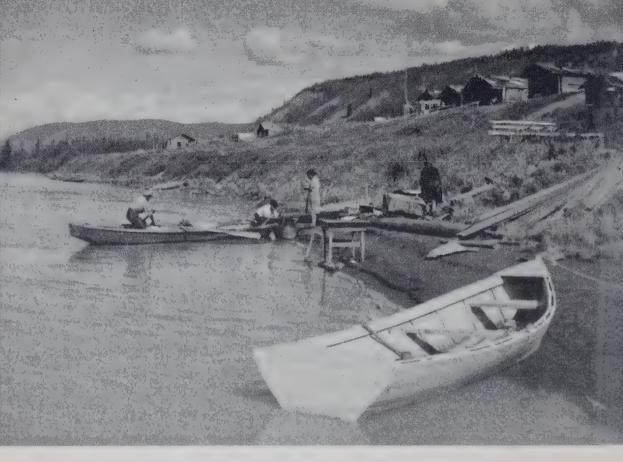
Valley as far north as Aklavik. In the Eastern Arctic, commercial air services operate chiefly on a charter basis. Landing facilities for the larger types of aircraft are not as yet available, but that is only because they are not necessary at the present stage of development of the North. As the demand for the minerals of the North becomes more urgent, so will facilities be expanded until there will be few parts of that everlasting frontier that are not relatively close to the amenities of civilization.

The People and Their Problems

The physical resources and accessibility of the North are the two primary factors in assessing its wealth. But what of the third important factor—the people? Without the people to bring them to life, water-power sites are merely turbulent stretches of river and potential mines are merely mineral formations.

Scattered throughout the million and a half square miles of the North there are little more than 12,000 white persons. They are concentrated mainly in the mining districts of Yukon and the Northwest Territories—at Dawson, Mayo and Whitehorse, and at Yellowknife and Port Radium. A small number inhabit the lonely outposts of the great beyond—the missionaries, the doctors, the fur traders and the scientists.

The native Indians and Eskimos also number a little more than 12,000. The Indians, in general, inhabit the forested areas of the north, while the Eskimos shun the wooded sections and live on the treeless Arctic Coast and Arctic Islands. Anthropologists believe that they are of Asiatic origin and came from Asia to America across Bering Strait, possibly as long ago as



Moosehide, an Indian village three miles north of Dawson on the Yukon River.

4,000 years. During most of this time their conditions of life remained unchanged as they followed their traditional hunting-fishing-trapping economy; that is, they lived at a level little removed from the stone age.

When the aggressive European invaded the North he followed his practice and brought his own civilization with him. As has happened in the past, the spread of civilization uncontrolled by government produced its usual adverse effects on the natives. Throughout the eighteenth and most of the nineteenth centuries this process went on. Gradually the old traditions of the natives gave way before the influence of the phonograph, motor schooner, and high-powered rifle. With the rifle the natives began very efficiently to exterminate the wildlife upon which their existence depended.

When, towards the close of the nineteenth century, the Canadian Government became responsible for the welfare of the natives, the problem was clearly a grave one. Basically, it involved reconciling the old life of the natives with the new life developing around them. This problem has changed only in degree down to the present. It is being solved step by step from day to day and it can safely be said that when the Federal Government began administering the affairs of the Northland, it was almost the first time in history that the advance of civilization was accompanied by a deliberated policy of benevolence to the native inhabitants.

The responsibility of the Federal Government for the welfare of the natives is only part of its manifold administrative activities. Federal responsibility also extends into such fields as transportation, communication, health and education and all of them pose their own difficult problems.

In the field of education, a system is being worked out that is unlike anything in previous Canadian history. The basic concept is to establish permanent schools in even the smaller communities and to appoint teachers with the special qualifications needed to develop the school as the centre of the community. The school is used for meetings, games and social events as well as for regular classroom work. Schools are provided with radios and moving-picture facilities, and circulating film libraries are carried on a regular schedule from school to school.

Special techniques must be used in dealing with nomadic groups of the North, particularly those in the Eastern Arctic. Some of these innovations are combinations of teaching and health centres (travelling schools and seasonal schools). Woven into this fabric of experiment are the older residential and mission day schools operated by the Church of England, the Roman Catholic Church, the Northern Canada Evangelical Mission, and the Calvary Baptist Mission at Yellowknife.

The story is similar in other fields of social welfare, such as medicine. At many points throughout the north small hospitals and health centres have been set up or subsidized by the Government to care particularly for the native population which is almost defenceless against even the commonest diseases of civilization. Family allowances (allowances paid in kind not cash) and old age pensions are paid to the inhabitants of the North.

The Eskimo people have always made for themselves certain articles for daily use, bowls, knives and the like and carved dolls and kayaks for the amusement of their children. When these were taken "outside" they became curiosities, sometimes objects of art. Eskimo skill in carving in ivory and soapstone had long been recognized but it remained for the Department of Resources and Development and the Canadian Handicrafts Guild to realize the market possibilities of these articles and through their efforts the groundwork has been laid for another subsidiary industry.

To assist the mining industry, government scientists, including geologists, geographers, geodesists, and topographers are gradually laying bare the form



An Eskimo woman having her eyes examined at a Government eye clinic.

and composition of the Northland. Annually, as many as 38 parties work through the country, producing detailed topographical maps and extending the geodetic net ever farther northward.

The Eastern Arctic outposts of civilization are supplied by a government-owned ship which travels more than 10,000 miles through the northern waters to carry food, equipment and replacement personnel to the various posts. The party normally includes administrative and medical officers, Royal Canadian Mounted Police personnel, technicians and scientists representing various government departments and other agencies. The ports of call include Fort Chimo, Coral Harbour, Cape Dorset, Lake Harbour, Frobisher Bay, Pangnirtung, River Clyde, Pond Inlet, Arctic Bay and Dundas Harbour. In 1950 the *C. D. Howe* made her maiden voyage on this mission, replacing the *Nascopie* which had been in service for many years.

The Joint United States-Canadian Weather Station Resupply Mission operates in the Eastern Arctic during the short summer season. This has been an annual undertaking since 1947. Three outposts are visited by boat—Resolute, Eureka and Alert. At Resolute, supplies are dropped and later carried by air to Mould Bay on Prince Patrick Island and Isachsen on Ellef Ringnes Island.

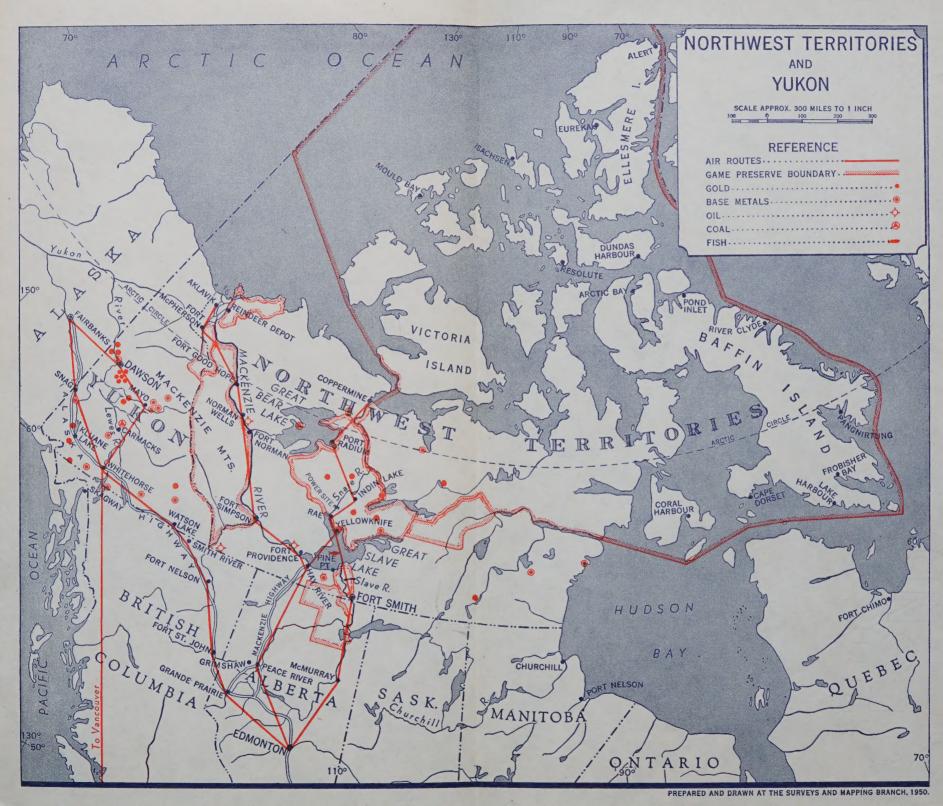
In all these projects, the policy of the Government in supplying services in keeping with the expansion of activity in the North is evident. Through the Development Services Branch of the Department of Resources and Development, administration of the Canadian North is carried out and the well-being of its people, white and native alike, protected.

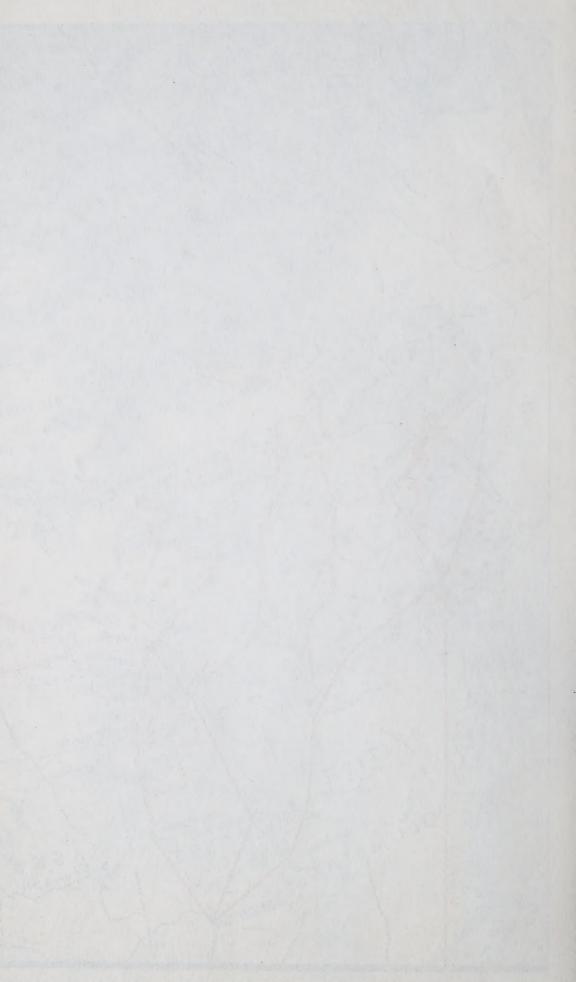
The Administration of the North

The Northwest Territories is governed by a Territorial Council composed of a Commissioner, a Deputy Commissioner, and five councillors appointed by the Governor in Council. The Commissioner in Council has power to make ordinances for the government of the Territories, under instruction from the Governor in Council or the Minister of Resources and Development. Such ordinances cover direct taxation to raise revenue, the establishment and tenure of territorial offices, the appointment and payment of officers, maintenance of prisons, municipal institutions, licences, solemnization of marriages, property and civil rights, administration of justice and, generally, all matters of a local or private nature. Council meetings are held regularly and the Council functions not only as a legislative body, but in an advisory capacity to the Minister of Resources and Development.

With the growth in centres of population in the Northwest Territories a form of local government, municipal in nature, was desirable. The Yellow-knife Administrative District was established in 1939 with a Board of Trustees composed of three members appointed by the Commissioner of the Northwest Territories for a period of one year and five members elected annually by the residents of the district. The Board elects its own chairman from among its members and functions in a manner similar to that of a town council. The Hay River Administration District was formed in 1949. The Trustee Board consists of two members elected locally and three, including the chairman, appointed by the Commissioner. That portion of the Northwest Territories lying west of the 109th meridian of longitude is now included in a new electoral

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district known as the Yukon-Mackenzie River Electoral District and is represented in the Parliament of Canada.

In Yukon, the government is composed of a Commissioner and an elective Legislative Council of three members having a three-year term of office. The Council, with the Commissioner, operates in a manner somewhat similar to a provincial government. The Council sits apart from the Commissioner and presents ordinances passed by it to the Commissioner for his assent. The Yukon Act provides that the Commissioner shall administer the government under instructions given him from time to time by the Governor in Council or the Minister of Resources and Development. The Commissioner in Council has the power to make ordinances dealing with the imposition of local taxes, sale of liquor, preservation of game, establishment of territorial offices, maintenance of prisons and municipal institutions, issuing of licences, incorporation of companies, solemnization of marriages, property and civil rights, administration of justice, and generally all matters of a local nature.

Within this framework of administration, the story of the North continues to unfold. A century and a half ago, when the early northern explorers stood on the decks of their wooden ships as they veered through the icelittered sea, it was impossible for them, looking ahead into that frozen land, to imagine what conditions would be like there in the twentieth century. To-day, in the middle of the twentieth century, it would indeed be unwise to predict the progress and development of the Canadian North in the next century and a half.

This, however, is certain, world demands for minerals will continue to spur on development and exploitation of northern resources. World supplies of many essential minerals are being depleted with the increased demands of modern civilization and the Canadian North holds out the promise of wealth and adventure.

